

REMARKS

Upon entry of this amendment, claims 1-4, 7 and 9-13 are all the claims pending in the application. Claim 8 has been canceled by this amendment.

I. Claim Rejections under 35 U.S.C. § 112, first paragraph

Claims 1-4 and 7-13 have been rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement.

In particular, the Examiner asserts that the specification does not describe that the etching of the lower electrode and the contact film is performed in a self-alignment manner with the hard mask, as recited in claim 1. Instead, the Examiner asserts that the specification discloses that etching is performed in a self-alignment manner with the first cover film 20.

Applicant notes that claim 1 has been amended to recite that etching is performed in a self-alignment manner with the first cover film. Accordingly, Applicant kindly requests that the rejection be reconsidered and withdrawn.

II. Claim Rejections under 35 U.S.C. § 103(a)

A. The Examiner has rejected claims 1, 4, 8, 9, 10, 12 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Fox et al. (U.S. 2002/0074601) in view of the Admitted Prior Art or Kanaya et al. (U.S. 6,611,014).

Regarding claim 1, Applicant notes that this claim has been amended to include the features previously recited in claim 8. Accordingly, claim 1 now recites the features of forming a first cover film so as to cover side surfaces of the upper electrode and the ferroelectric film and

the top surface of the hard mask; and forming a second cover film so as to cover the multi layer body after the etching of the lower electrode and the contact film. Applicant respectfully submits that the applied prior art fails to teach or suggest this combination of features.

In the Office Action, Applicant notes that the Examiner has indicated that Fox discloses, at step 400, the formation of a first cover film 112 so as to cover side surfaces of an upper electrode 10 and a ferroelectric film 106/108 (see Figs. 1, 4 and 5; paragraph [0054]; and the Office Action at page 4). In addition, Applicant notes that the Examiner has indicated that Fox discloses, at step 218, the formation of a second cover film 112 after the etching of a lower electrode 104 and a contact film 102 (see Figs. 1 and 2; paragraph [0049]; and the Office Action at page 5). Applicant respectfully disagrees with the Examiner's position.

In particular, Applicant notes that Fox does not disclose the formation of two cover films, but instead, only discloses the formation of a single cover film 112 (see Fig. 1). In this regard, Applicant notes that, in Fox, step 218 (as shown in Fig. 2) is drawn to the formation of an encapsulation layer 112 in a first embodiment, and that step 400 (as shown in Figs. 4 and 5) is drawn to the formation of the encapsulation layer 112 in an alternative embodiment.

Further, with respect to the formation of the encapsulation layer 112 in step 218 of the first embodiment, Applicant notes that Fox clearly describes that the encapsulation layer 112 is formed before the etching of lower electrode 104 and the adhesion layer 102 (see paragraph [0049]). Moreover, as shown in the alternative embodiment of Fig. 4, the encapsulation layer is formed in step 400, which is prior to the etching of the bottom electrode 104 in step 404.

Based on the foregoing description of Fox, Applicant respectfully submits that while Fox discloses that an encapsulation layer 112 is formed (e.g., step 218 or step 400) so as to cover side surfaces of an upper electrode 110 and a ferroelectric film 106/108, that Fox does not disclose or in any way suggest that a second cover film is formed after etching the lower electrode 104 and the adhesion layer 102.

In view of the foregoing, Applicant respectfully submits that Fox does not disclose, suggest or otherwise render obvious the combination of features of forming a first cover film so as to cover side surfaces of the upper electrode and the ferroelectric film and the top surface of the hard mask; and forming a second cover film so as to cover the multi layer body after the etching of the lower electrode and the contact film, as recited in amended claim 1.

Furthermore, Applicant respectfully submits that neither Kanaya nor the Admitted Prior Art, either alone or in combination, cures the deficiencies of Fox with respect to the above-noted combination of features recited in amended claim 1. Accordingly, Applicant respectfully submits that claim 1 is patentable over the cited prior art, an indication of which is kindly requested.

Claims 4, 9, 10, 12 and 13 depend from claim 1 and are therefore considered patentable at least by virtue of their dependency.

B. The Examiner has rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Fox et al. and Kanaya et al., and further in view of Jung et al.

Claim 2 depends from claim 1. Applicant respectfully submits that Jung fails to cure the deficiencies of Fox and Kanaya, as discussed above, with respect to claim 1. Accordingly,

Applicant respectfully submits that claim 2 is patentable over the cited prior art, an indication of which is kindly requested.

C. The Examiner has rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Fox et al. and Kanaya et al, and further in view of Applicant's Admitted Prior Art.

Claim 3 depends from claim 1. As noted above, Applicant respectfully submits that Fox, Kanaya et al., and Applicant's Admitted Prior Art, fail to disclose, suggest or otherwise render obvious all of the features of claim 1. Accordingly, Applicant respectfully submits that claim 3 is patentable over the cited prior art, an indication of which is kindly requested.

D. The Examiner has rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Fox et al. and Kanaya et al., and further in view of Ohyagi.

Claim 7 depends from claim 1. Applicant respectfully submits that Ohyagi fails to cure the deficiencies of Fox and Kanaya, as discussed above, with respect to claim 1. Accordingly, Applicant respectfully submits that claim 7 is patentable over the cited prior art, an indication of which is kindly requested.

E. The Examiner has rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Fox et al. and Kanaya et al., and further in view of Nagano et al.

Claim 11 depends from claim 1. Applicant respectfully submits that Nagano fails to cure the deficiencies of Fox and Kanaya, as discussed above, with respect to claim 1. Accordingly,

Applicant respectfully submits that claim 11 is patentable over the cited prior art, an indication of which is kindly requested.

III. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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